

Title: Most prognostic factor related to development of traumatic osteonecrosis of femoral head following hip dislocation. Time to relocation or severity of injury?

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Femoral head osteonecrosis following hip dislocations has been reported to be directly related to the timing of reduction. Reduction within six hours of injury was reported to lower the risk to 10%. Most previous reports concluded no good results were achieved if reduction is delayed beyond twenty-four hours. In this study, factors which are implicated in the development of traumatic osteonecrosis of femoral head were evaluated.

Thirty-eight patients with simple posterior hip dislocation admitted to a single tertiary centre were evaluated. All patients were treated with closed manual reduction. Plain radiograph of the hip was done to screen for occurrence of osteonecrosis of the femoral head. The duration of injury until the last x-ray done must be more than four months post injury.

The mean age was 25 years (range 14 to 48 years). Majorities were males (92.1%) and motorcyclists (71.0%). 15.7% had associated femoral head fracture, while 31.6% had posterior acetabular fracture. Time to relocation for 42.1% of cases was less than six hours, with 28.9% of cases were reduced after twelve hours. Mean duration from the onset of injury until last x-ray done was 41 months (range 4 to 99 months). No case of avascular necrosis of the femoral head was reported. All of the hips had good to excellent functional and radiographic outcome.

The findings were not consistent with previous reports concluding no good results achieved if reduction is delayed beyond 24 hours. This supports the claim that the severity of injury sustained rather than delay in treatment is the more important factor influencing the occurrence of femoral head osteonecrosis.